

Appl. No. 09/208,097

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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

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- Claim 1. (currently amended) A method for providing programming in a television delivery system, comprising:
- packaging the programming at a television delivery center, wherein the packaging includes at least one program;
 - generating menu information related to the programming packaging, wherein the menu information include menu data for interactive services and data services, and wherein the menu information is generated automatically by an operations center by analyzing the programming packaging using a heuristic thereby filtering and indexing the programming for display;
 - transmitting the menu data for the interactive services and the data services to viewers;
 - providing the menu information to terminals using the television delivery system;
 - storing the menu information in the terminals;
 - displaying the menu information as programming menus, wherein a programming menu is displayed on a first portion of a display coupled to a terminal and wherein the programming menu is displayed using a television channel;
 - choosing a program from the displayed programming menu;
 - receiving a program selection based on the program chosen from the displayed programming menu;
 - switching the terminal from the television channel carrying the programming menu to a television channel carrying the chosen program, wherein the switching step is completed in response to a single control function; and
 - displaying the chosen program on the display.
- Claim 2. (original) The method of claim 1, further comprising transmitting menu templates to the terminals, wherein the menu information is menu data and wherein the terminals create the programming menus based on the menu data and the menu templates.
- Claim 3. (original) The method of claim 1, wherein the menu information is provided to the terminals as the programming menus.
- Claim 4. (original) The method of claim 1, wherein the television delivery system includes a cable television headend.

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Claim 5. (original) The method of claim 1, wherein the television delivery system includes a backyard satellite receiver.

Claim 6. (original) The method of claim 1, wherein the television delivery system includes an operations center.

Claim 7. (original) The method of claim 6, wherein the operations center transmits the menu information and the programming to the cable television headend, and wherein the cable television headend inserts local programming into the packaging and local menu information into the menu information.

Claim 8. (original) The method of claim 1, wherein the menu information includes date, time of day, channel and descriptive information for at least one program.

Claim 9. (original) The method of claim 8, wherein the descriptive information includes a program title, a program rating and a program run time.

Claim 10. (original) The method of claim 1, wherein the choosing step comprises:
operating a control to highlight a program on the programming menu; and
operating the control to designate the highlighted program as the chosen program.

Claim 11. (original) The method of claim 10, wherein a portion of the programming menu extends beyond a screen size of the display, the choosing step further comprising operating the control to scroll to the portion of the programming menu that exceeds the screen size.

Claim 12. (original) The method of claim 11, wherein the control is a remote control, the remote control including cursor buttons to navigate the programming menu, scroll the programming menu and highlight the programs, and a go button to designate the chosen program, and wherein an operation of the go button completes the single control function.

Claim 13. (original) The method of claim 12, wherein the remote control is one of an infra red control and a radio frequency control.

Claim 14. (original) The method of claim 1, further comprising updating the programming menus as programming packaging changes.

Claim 15. (original) The method of claim 1, wherein the programming menu includes a video window, the video window used to display a video.

Claim 16. (original) The method of claim 15, wherein the video includes advertisements targeted to the terminal.

Claim 17. (original) The method of claim 16, wherein the advertisements are targeted based on viewer profile information.

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Claim 18. (original) The method of claim 17, wherein the viewer profile information includes one of programs watched information and viewer demographic information.

Claim 19. (previously presented) The method of claim 16, wherein the advertisements are displayed prior to display of the chosen program.

Claim 20. (original) The method of claim 1, wherein the displayed program includes an overlay menu, the overlay menu further including a connection to alternate programming.

Claims 21-22. (canceled)

Claim 23. (original) The method of claim 1, wherein the menu data is provided over a cable television cable.

Claim 24. (original) The method of claim 1, wherein the providing step further comprises:

 sending the menu information to an online address; and

 coupling the online address to the terminals, wherein when the online address is accessed, the menu information is displayed on the display as the programming menus.

Claim 25. (original) The method of claim 24, wherein the chosen program is selected by selecting a program from the programming menus accessed through the online address.

Claim 26. (original) The method of claim 25, wherein when the chosen program is selected, the terminal switches from the online address to a channel carrying the selected program.

Claim 27. (original) The method of claim 1, wherein the chosen program includes one of a single event, a multiple event and a subscription.

Claim 28. (original) The method of claim 27, wherein the subscription includes a specialty channel subscription and a specialty program subscription.

Claim 29. (original) The method of claim 28, wherein the specialty channel subscription includes monthly and annual subscriptions.

Claim 30. (previously presented) The method of claim 28, wherein the specialty channel subscription is a hit movie channel subscription.

Claims 31-33 (canceled)

Claim 34. (currently amended) A method for generating a television program menu for use by viewers in selecting programs based on program line-up information, comprising:

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obtaining and storing the program line-up information for each program, the program line-up information including program name, program start time, program duration, program category and program price;

generating menu data based on the program line-up information, wherein the menu data include menu information for interactive services and data services, and wherein the menu information is generated automatically by an operations center by analyzing the program line-up information using a heuristic thereby filtering and indexing the program line-up information for display;

transmitting the menu information for the interactive services and the data services to viewers;

creating a program control information signal using the generated menu data;

transmitting the programs to the viewers; and

transmitting the program control information signal simultaneously with the programs.

Claim 35. (previously presented) The method of claim 34, wherein the program control information signal also contains information for identifying channels for the interactive services and the data services available to the viewers, the method further comprising:

collecting information on the interactive and the data services available;

inventorying the interactive and the data services to be made available to the viewer;

assigning the channels for the interactive and the data services; and

creating menu data for the interactive and the data services for transmission to the viewers.

Claims 36-37. (canceled)

Claim 38. (currently amended) A method for selecting a program from a broadcast television system, comprising:

generating program menu data related to programming packaging, wherein the menu data include menu information for interactive services and data services, and wherein the menu information is generated automatically by an operations center by analyzing the programming packaging using a heuristic thereby filtering and indexing the programming packaging for display;

transmitting the menu information for the interactive services and the data services to viewers;

providing the menu data to a terminal in the broadcast television system;

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creating a menu from the menu data, wherein the menu includes a window;
scrolling the menu to a desired program; and
selecting the desired program for display on a display coupled to the terminal,
wherein the selected program is displayed in response to a single control function.

Claim 39. (original) The method of claim 38, wherein the generating step comprises:

packaging programs; and
generating program control information related to the packaged programs, wherein
the program control information includes the menu data and wherein the window is scalable.

Claim 40. (original) The method of claim 39, wherein the programs are packaged by
program category.

Claim 41. (original) The method of claim 39, wherein the programs are packaged by
date and time of broadcast.

Claim 42. (original) The method of claim 39, wherein the programs include digital
programs.

Claim 43. (original) The method of claim 38, wherein the menu data is provided in
a program control information signal.

Claim 44. (original) The method of claim 43, wherein the program control
information signal is provided in a vertical blanking interval.

Claim 45. (original) The method of claim 43, wherein the program control
information signal is provided in a dedicated channel.

Claim 46. (original) The method of claim 38, further comprising:
generating menu templates;

providing the menu templates to the terminals; and

storing the menu templates in a memory of the terminal.

Claim 47. (original) The method of claim 46, wherein the terminal creates a menu
from the menu data, the menu displayed according to the menu templates.

Claim 48. (original) The method of claim 46, wherein the menu templates include
an introductory menu template, a home menu template, major menu templates and submenu
templates, and wherein the displayed menu includes an introductory menu, a home menu,
major menus and submenus.

Claim 49. (original) The method of claim 48, wherein the major menus are arranged
according to program categories, and wherein the major menus display programs available
for viewing.

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- Claim 50. (original) The method of claim 49, wherein the display of programs available for viewing comprises a list of program titles.
- Claim 51. (original) The method of claim 49, wherein the display of programs available for viewing includes a program rating.
- Claim 52. (original) The method of claim 38, wherein the menu is displayed on a television display, wherein portions of the menu exceed a display size of the television display, wherein the portions of the menu that exceed the display size are accessed by scrolling with a remote control,
- Claim 53. (original) The method of claim 52, wherein the selected program is selected by selecting a program title using a remote control.
- Claim 54. (original) The method of claim 53, wherein the remote control is one of an infrared control and a radio frequency control.
- Claim 55. (original) The method of claim 54, wherein the remote control comprises cursor buttons and a go button, and wherein the cursor buttons are operated to scroll the menu and to highlight the desired program title and the go button is operated to select the highlighted program title.
- Claim 56. (original) The method of claim 52, wherein the selected program is selected by selecting a program title using a control on the terminal.
- Claim 57. (original) The method of claim 48, wherein the submenus include program description menus, notification menus, escape menus, and return to program menus.
- Claim 58. (original) The method of claim 57, wherein the program description menus include a program description, a program preview video, and a cost to order and wherein the program preview video is displayed in the window.
- Claim 59. (original) The method of claim 58, wherein the program description menus further include an order button, a return to menu button and a return to broadcast television button, wherein a program is ordered by highlighting the order button using a cursor and selecting the order button using a go button.
- Claim 60. (original) The method of claim 59, wherein the cursor and the go button are included in a remote control operably coupled to the terminal.
- Claim 61. (original) The method of claim 57, wherein the escape menu includes a time to program start, a cancel button and a return to broadcast television button, wherein operation of the cancel button ends a selected program without charge, the cancel button displayed for a fixed time measured from a start of the selected program.

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Claim 62. (currently amended) A system that provides programming selection from a menu, comprising:

a television delivery system that packages programming, wherein the programming package includes at least one program, generates menu information related to the programming, and provides the programming package and the menu information to subscribers, wherein the menu information include menu data for interactive services and data services, and wherein the menu information is generated automatically by an operations center by analyzing the programming using a heuristic thereby filtering and indexing the programming for display;

a terminal operably connected to the television delivery system, the terminal comprising:

a memory that stores the menu information;

a processor connected to the memory that processes the menu information to generate the menu, and

a control operably connected to the processor that provides program selection instructions to the processor; and

a display operably connected to the terminal that displays the menu and the programming, wherein the terminal switches to a channel carrying a program selected from the menu in response to a program selection instruction, the program selection instruction being a single control function.

Claim 63. (original) The system of claim 62, wherein the channel is a virtual channel created by the terminal.

Claim 64. (original) The system of claim 62, wherein the television delivery system provides menu templates to the terminal, the memory storing the menu templates, the processor generating the menus based on the menu templates and the menu information.

Claim 65. (original) The system of claim 62, wherein the television delivery system provides the menu information as programming menus.

Claim 66. (original) The system of claim 62, wherein the television delivery system includes an operations center.

Claim 7. (original) The system of claim 62, wherein the television delivery system includes a cable television headend.

Claim 68. (original) The system of claim 67, wherein the operations center transmits the menu information and the programming to the cable television headend, and wherein the

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cable headend inserts local programming into the programming package and local menu information into the menu information.

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Claim 69. (original) The system of claim 62, wherein the menu information includes date, time of day, channel and descriptive information for the at least one program.

Claim 70. (original) The system of claim 69, wherein the descriptive information includes a program title, a program rating, and a program start time.

Claim 71. (original) The system of claim 62, wherein the program selection instructions include highlight a desired program and select the desired program.

Claim 72. (original) The system of claim 62, wherein the control is a remote control, the remote control comprising:

cursor buttons operable to navigate the menu, to scroll the menu, and to highlight programs shown on the menu; and

a select button operable to select a desired program, wherein an operation of the select button completes the single control function.

Claim 73. (original) The system of claim 72, wherein the remote control is one of an infrared control and a radio frequency control.

Claim 74. (original) The system of claim 62, wherein the television delivery system updates the menu information based on programming package changes and provides the updated menu information to the terminal.

Claim 75. (original) The system of claim 62, wherein the menu includes a video window, the video window used to display a video.

Claim 76. (original) The system of claim 75, wherein the video is an advertisement.

Claim 77. (original) The system of claim 76, wherein the advertisement is targeted to the terminal.

Claim 78. (original) The system of claim 77, wherein the advertisement is targeted based on viewer profile information.

Claim 79. (original) The system of claim 78, wherein the viewer profile information includes programs watched information.

Claim 80. (original) The system of claim 78, wherein the viewer profile information includes viewer demographic information.

Claim 81. (original) The system of claim 62, wherein when the selected program is displayed, the selected program includes an overlay menu, the overlay menu including a connection to alternate programming.

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Claim 82. (original) The system of claim 81, wherein the alternate programming includes an online address.

Claim 83. (original) The system of claim 62, wherein the programming package and the menu information are provided over a cable television cable.

Claim 84. (original) The system of claim 62, wherein the programming package and the menu information are provided over a fiber optic cable.

Claim 85. (original) The system of claim 62, wherein the programming package and the menu information are provided over a satellite broadcast and are received by a backyard satellite receiver.

Claim 86. (original) The system of claim 62, wherein the programming package includes digital programs.

Claim 87. (currently amended) An apparatus that provides for television program selection from a displayed menu, comprising:

a terminal that receives television programs and menu data related to the television programs, wherein the menu data include menu information for interactive services and data services, and wherein the menu information is generated automatically by an operations center by analyzing the television programs using a heuristic thereby filtering and indexing the television programs for display;

a display coupled to the terminal that displays the menu data and the television programs; and

a control that scrolls through the menu data, cursors through the menu data, and selects a desired television program from the television programs, wherein when the desired television program is selected, the terminal switches to a channel carrying the selected television program and the display displays the selected television program.

Claim 88. (original) The apparatus of claim 87, wherein the television programs include digital programs.

Claim 89. (original) The apparatus of claim 87, further comprising a backyard satellite receiver, wherein the television programs are received by the backyard satellite receiver.

Claim 90. (original) The apparatus of claim 89, wherein the menu data is received by the backyard satellite receiver.

Claims 91-92. (canceled)

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Claim 93. (original) The apparatus of claim 87, further comprising a fiber optic connector, wherein the television programs and the menu data are received by the fiber optic connector.

Claim 94. (original) The apparatus of claim 87, wherein the selected television program includes one of a single event, a multiple event and a subscription.

Claim 95. (original) The apparatus of claim 94, wherein the subscription includes a specialty channel subscription and a specialty program subscription.

Claim 96. (original) The apparatus of claim 95, wherein the specialty channel subscription includes monthly and annual subscriptions.

Claim 97. (previously presented) The apparatus of claim 95, wherein the specialty channel subscription is a hit movie channel subscription.

Claims 98-100. (canceled)

Claim 101. (original) The apparatus of claim 87, further comprising:
a processor; and

a memory coupled to the processor wherein the menu data is stored in the memory and wherein the processor processes the menu data to generate a television program menu.

Claim 102. (original) The apparatus of claim 101, wherein the television program menu includes a video window.

Claim 103. (original) The apparatus of claim 102, wherein the video window displays a program.

Claim 104. (original) The apparatus of claim 103, wherein the program includes one of a still video and a moving video.

Claim 105. (original) The apparatus of claim 103, wherein the program is text.

Claim 106. (original) The apparatus of claim 103, wherein the program is related to the desired television program.

Claim 107. (original) The apparatus of claim 87, wherein the channel is a virtual channel.

Claim 108. (currently amended) An apparatus for selecting programs, comprising:

a receiver that receives programs and program control information related to the received programs, wherein the program control information include menu information for interactive services and data services, and wherein the menu information is generated automatically by an operations center by analyzing the programs using a heuristic thereby filtering and indexing the programs for display;

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a memory coupled to the receiver that stores the program control information;

a processor coupled to the receiver and the memory, the processor processing the program control information to generate a program menu, the program menu stored in the memory, wherein the program menu provides a list of available programs for viewing;

a display coupled to the processor that displays the program menu and the programs;

and

a control coupled to the processor, the control providing program selection signals, wherein the program selection signals select a program for viewing on the display, the program selected from the list of available programs shown on the program menu.

Claim 109. (original) The apparatus of claim 108, wherein the selected program includes one of a single event, a multiple event and a subscription.

Claim 110. (original) The apparatus of claim 109, wherein the subscription includes a specialty channel subscription and a specialty program subscription.

Claim 111. (original) The apparatus of claim 110, wherein the specialty channel subscription includes monthly and annual subscriptions.

Claim 112. (previously presented) The apparatus of claim 110, wherein the specialty channel subscription is a hit movie subscription.

Claims 113-115. (canceled)

Claim 116. (previously presented) The apparatus of claim 110, wherein the specialty channel subscription is a mini-pay subscription.

Claim 117. (original) The apparatus of claim 109, wherein the subscription includes on line services.

Claim 118. (original) The apparatus of claim 109, wherein the subscription includes data services.

Claim 119. (currently amended) An apparatus for selecting programs, comprising:

a receiver that receives the programs and program information related to the received programs, wherein the program information include menu information for interactive services and data services, and wherein the menu information is generated automatically by an operations center by analyzing the programs using a heuristic thereby filtering and indexing the programs for display;

a display that displays a program menu based on the program information; and

a control, operable to select a program for viewing, the program selected based on the displayed program information, wherein a program available for selection includes a

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subscription to a specialty channel, and wherein operation of the control starts the
subscription to the specialty channel.

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Claim 120. (original) The apparatus of claim 119, further comprising:

a memory coupled to the receiver, the memory storing the program information; and
a processor coupled to the receiver and the memory, the processor processing the
program information to generate the program menu, the program menu stored in the memory,
wherein the program menu provides a list of available programs for selection.

Claim 121. (previously presented) The apparatus of claim 119, wherein the
specialty channel includes a mini pay.

Claim 122. (previously presented) The apparatus of claim 119, wherein the
specialty channel is a hit movie channel.

Claim 123. (canceled)

Claim 124. (previously presented) The apparatus of claim 119, wherein the
program available for selection further includes a specialty program.

Claim 125. (previously presented) The apparatus of claim 124, wherein the
specialty program includes one of a single event and a multiple event.

Claim 126. (canceled)

Claim 127. (currently amended) A method for selecting programs, comprising:

receiving programs and program information related to the received programs,
wherein the program information include menu information for interactive services and data
services, and wherein the menu information is generated automatically by an operations
center by analyzing the programs using a heuristic thereby filtering and indexing the
programs for display;

transmitting the menu information for the interactive services and the data services to
viewers;

displaying a program menu based on the program information; and
ordering a subscription to a program using a remote control, the program listed in the
program menu, wherein the subscription includes a subscription to a specialty channel.

Claim 128. (original) The method of claim 127, wherein the subscription includes
daily, monthly and annual subscriptions.

Claim 129. (previously presented) The method of claim 128, wherein the specialty
channel includes a hit movie channel.